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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/567,757

02/10/2006

Hiromoto Ohno

Q77185

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23373 7590 03/28/2008
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EXAMINER

PARSA, JAFAR F

ART UNIT

PAPER NUMBER

1621

MAIL DATE

DELIVERY MODE

03/28/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/567,757	Applicant(s) OHNO ET AL.	
	Examiner Jafar Parsa	Art Unit 1621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE three MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2/10/2006</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Ohno et al (WO 01/98240 A2).

Ohno teaches a process for producing CF_3CF_3 with good profitability using CF_3CHF_2 containing a compound having chlorine atom within the molecule, and use thereof. Ohno teaches that a gas mixture containing CF_3CHF_2 and a compound having chlorine atom within the molecule is reacted with hydrogen fluoride in the presence of a fluorination catalyst, thereby converting CClF_2CF_3 as a main impurity into CF_3CF_3 , and CF_3CHF_2 containing CF_3CF_3 , is reacted with fluorine gas in the gaseous phase in the presence of a diluting gas. See abstract.

Ohno teaches that the gas mainly comprising CF_3CHF_2 is introduced into a distillation tower, then CF_4 , CHF_3 , CF_3CF_3 , CF_3CHF_2 and CClF_2CF_3 as the low boiling fraction are extracted from the top of the distillation tower, and CF_3CHClF and $\text{CF}_3\text{CH}_2\text{Cl}$ as the high boiling fraction are extracted from the bottom. The high boiling fraction extracted from the bottom is circulated into the reaction with hydrogen fluoride

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of the step (1). Here, the total amount of the compound having chlorine atom, which is contained in the distillate mainly comprising CF_3CHF_2 extracted from the top, is preferably 0.02 vol % or less. The distillate mainly comprising CF_3CHF_2 is used as a starting material in the direct fluorination reaction with fluorine gas. See page 17, line 15 through page 18, line 10.

The process for producing hexafluoroethane as described above wherein the compound having chlorine atom is at least one compound selected from the group consisting of chloromethane, chlorotrifluoromethane, chloropentafluoroethane, dichlorotetrafluoroethane, chlorotetrafluoroethane, chlorotrifluoroethane and chlorotrifluoroethylene. The process for producing hexafluoroethane as described above, wherein the total amount of the compound having chlorine atom contained in the gas mixture is 1 vol % or less. See page 6, line 21 through page 7 line 4.

Ohno teaches that the process for producing hexafluoroethane is carried out at a temperature in the range of 150 to 480°C . The molar ratio of hydrogen fluoride/organic substance contained in the gas mixture is in the range of 0.5 to 5. See page 7, lines 12-22. Ohno teaches that the diluting gas is a gas containing at least one selected from the group consisting of tetrafluoromethane, hexafluoroethane, octafluoropropane and hydrogen fluoride. See page 8, lines 14-17.

Ohno teaches that the hexafluoroethane is used as an etching or cleaning gas in the process of producing a semiconductor device. See page 5, lines 14-16, page 10, lines 10-15 and Table 1.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jafar Parsa whose telephone number is (571)272-0643. The examiner can normally be reached on 9 a.m.-5:30 p.m. (M-F).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bonnie Eyler can be reached on 571-272-0871. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Jafar Parsa/
Primary Examiner, Art Unit 1621
March 26, 2008